

REMARKS

Claims 1-27 were originally presented for examination and were subjected to a Restriction Requirement. Claims 3, 4, 23, 25 and 26 were elected with traverse. By virtue of this response, claims 3, 4, 19, 23, 25 and 26 are amended, and new claims 28 and 29 are added. Support for the "exposing" step in claims 3 and 4 is provided at e.g., p. 26, lines 21-22. New claim 28 is supported by e.g., p. 26, line 23. Support for claim 29 is provided at e.g., page 25, line 25 through page 26, line 9. Amendments are made for purposes of clarity unless otherwise indicated and should not be construed as an acquiescence in any ground of rejection. Claims 3, 4, 23, and 25-29 are currently under consideration. Applicants respond to the Examiner's comments in the order made.

1. Election and Restriction

The Examiner maintains the restriction requirement on the basis that "because Group II, claim 3 or 4 does not include the feature step as presently claimed in the amended claim 19 of Group IV, and therefore, would require additional search and/or consideration." Applicants do not understand the term "feature step", nor do they understand to which portion of claim 19 this term is intended to refer. Clarification is requested. Claim 19 has been amended to conform to the format of amended claims 3 and 4. However, it is submitted that amended claim 19 shares unity of invention with claims 3 and 4 for essentially the same reason as described in the last response. That is, the prior art does not disclose the special technical feature of an Ala residues occupying position +3 of a zinc finger to bind to a triplet with methylated C as its central residue. It is noted that the Examiner has cited a reference (Choo) allegedly disclosing the same. However, for the reasons discussed below, it is submitted that the Choo reference is not prior art in that the reference is dated after the priority date to which the present claims are entitled. Therefore, the Group II and IV claims are distinguished over the cited art.

for the same reasons and no additional search is required for the Group IV claims.
Withdrawal of the restriction between Groups II and IV is respectfully requested.

2. Drawings

The Examiner says there is an inconsistency between Fig. 1b which refers to an M nucleotide and the description of this figure in the text which refers to an N nucleotide. In fact, the two descriptions are consistent. The N-nucleotide in the text is used to refer generically to three possibilities, (i) 5-methylcytosine, (ii) thymine and (iii) cytosine. These three possibilities are shown in the subparts of Fig 1b labeled (i), (ii) and (iii) respectively. The M in Fig. 1b part (i) is used to designate the 5-methylcytosine referred to in the text. See also page 30, lines 28-29 of the specification.

3. Specification

An abstract from the PCT case from which the present case derives is attached on a separate sheet.

The Examiner says the subscripts in the peptide sequence at p. 7, lines 6 and 15 are undecipherable. The specification has been amended to provide these subscripts in larger typeface.

The Examiner says that the specification contains a possible typographic or grammatical error at p. 7, lines 31-32. In response, the cited passage has been amended for clarity. Applicants note the Examiner's request to correct errors in the specification and, in response, have also corrected a typographical error at page 15, line 9.

The Examiner says that p. 6, line 32 to p. 7, line 3 incorporates references providing essential material. However, the teaching of the references directed to the structure of Cys2His2 class of zinc finger proteins is already reproduced in the specification underneath the citation of the references (p. 7, lines 5-21). Given that the present claims are directed to preparing DNA binding polypeptides of the Cys2His2 class, and this structure is provided in the specification, it is not seen that any further

teaching of the references is essential to practice of the claimed method. Likewise, it is not seen that other cited references provide essential material. However, if applicant or the Examiner becomes aware of such reference, then applicant will consider incorporating material from it into the specification.

5. Rejections under 35 USC 112, second paragraph

Claims 3 and 4 stand rejected on the basis that a step of making a DNA binding polypeptide has been omitted. The claims have been amended to include such a step, and an additional step of binding the zinc finger protein to its target site.

The Examiner also says the conditional requirement in claim 4 is indefinite. If the Examiner is referring to the phrase "capable of binding," such has been deleted from the claim mooting the rejection. If the Examiner was not referring to the phrase "capable of binding," clarification is requested.

The Examiner says that negative limitation "is not Asp" is indefinite as to the residues it includes or excludes. Applicant disagrees. The limitation "not Asp" excludes Asp and includes any other amino acid. Although this definition may be broad as to the included amino acids, it is not indefinite.

The Examiner also says that the terms "may be" and "and/or" are indefinite. "May be" has been replaced with --is-- and "and/or" rewritten in the form of A or B or both A and B (where A and B are claim elements).

The Examiner also says the term "small" amino acid is indefinite. This term has been deleted.

Claim 23 is said to be indefinite in reciting that two or more zinc finger motifs are placed N-terminus to C-terminus. The phrase "N-terminus to C-terminus" has been deleted.

The Office Action states that claim 26 is indefinite because neither of claims 3 and 4 (from which claim 26 depends) contain steps of randomization and selection. Applicants do not understand this basis of rejection, inasmuch as randomization and selection are the additional limitations which distinguish claim 26

from its parent claims. Claim 26 has been amended to substitute the term "screening" for "selection." Support for the steps of randomization and screening can be found, for example, at pages 11-12 and 15-16 of the specification. In addition, claim 26 now recites that the improvement is in the binding characteristics of the protein. Applicants respectfully request that the rejection be withdrawn. If the rejection is maintained, Applicants request that that the reason for this rejection be clarified.

6. Rejection under 35 USC 102(a)

Claims 3, 4, 23, 25 and 26 stand rejected as anticipated by Choo under 35 USC 102(a). However, the cited article was published in the April edition of Nature Structural Biology. All of the present claims are entitled at least to a priority date of March 31, 1998 via GB 9806895.0 filed March 31, 1998. A copy of this priority document is attached. As the Examiner can see, this priority document contains a corresponding claim for each of claims 1-25 in the present application. The priority document also provides support for present claim 26 at e.g., pp. 10-12. The priority document also provides support for the amendments made to the original claims and new claims introduced in this response. The "exposing" step in claims 3 and 4 is supported at e.g., p. 23, lines 23-24 of the priority document. New claim 28 is supported by e.g., p. 23, line 26 of the priority document. New claim 29 is supported at e.g. p. 23, lines 6-12 of the priority document. Therefore, all pending claims are supported by a priority document filed before the date of the cited reference, and the cited reference is not prior art under 35 USC 102(a).

7. Rejection under 35 USC 102(d)

Claims 3, 4, 23, 25 and 26 stand rejected as anticipated by Choo, GB 9805576.7 under 35 USC 102(d). 35 USC 102(d) applies when

the invention was first patented or caused to be patented, or was the subject of an inventor's certificate, by the applicant or his legal representatives or assigns in a foreign country prior to the date of the application for patent in this country

on an application for patent or inventor's certificate filed more than twelve months before the filing of the application in the United States.

Here, the cited GB application does not constitute 102(d) prior art for two reasons. First, the application was not filed more than 12 months before the effective US filing date of the present application (i.e., the date of the PCT filing of which the present application is the national phase). The PCT was filed March 17, 1999 exactly one year after GB 9805576.7. Second, GB 9805576.7 has not matured into a GB patent before the effective filing date of the present application (i.e., March 17, 1999). In fact, GB 9805576.7 has been abandoned, and thus has not even to the present date matured into a granted patent. For these reasons, GB 9805576.7 does not constitute prior art under 35 USC 102(d). Moreover, the cited reference is a priority application of the present application, as stated on the Request for National Phase Filing dated September 18, 2000, and as listed on the filing receipt of the present application.

8. Double patenting

Claim 4 stands provisionally rejected over claim 3 of copending application 09/424,488. This rejection is traversed insofar as applied to the amended claim 4. Claim 4 has been amended so as to require that the mid nucleotide of a triplet is 5-meC, and position +3 in the α -helix is Ala. Accordingly, amended claim 4 is distinguished from the claims of the cited copending application and the rejection should be withdrawn.

Applicants provide the Examiner a copy of the pending claims from 09/424,487 and 09/424,482. However, the present claims are distinguished from those in the '487 and '482 applications for at least the same reasons as those discussed in connection with the '488 application.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

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Application No.: 09/646,353
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PATENT

Respectfully submitted,


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